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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary****Application No.**

10/826,599

**Applicant(s)**

ENGLEHART, MATTHEW

**Examiner**

INSUN KANG

**Art Unit**

2193

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 16-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. This action is responsive to the amendment filed on 5/18/2009.
2. Claims 1-14 and 16-30 are pending.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-5, 7-14, and 16-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ortal (U.S. PGPUB 2004/0034846) in view of Kodosky et al. (US Patent 7,367,028) hereafter Kodosky.

With respect to claims 1 and 23:

Per claim 1:

Ortal discloses receiving a user request to define a parameter or a setting of a block ; (Col 8:0124-0125, "...a user desires to add an attribute to a class..."; Col. 2:0012)...generating a preview of code representative of the code for the block(Col 5:0080, "...displaying at least a portion of the source code that has been modified...").

Ortal does not explicitly disclose that the model is a simulatable block diagram model. Kodosky teaches that such a use of a simulatable block diagram model was known in the pertinent art, at the time applicant's invention was made, to simulate a graphical program (i.e.

col. 6 lines 20-34). It would have been obvious for one having ordinary skill in the art to modify Ortal's disclosed system to incorporate the teachings of Kodosky. The modification would be obvious because one having ordinary skill in the art would be motivated to simulate the model in Ortal to dynamically apply the model and code association.

Ortal further discloses: determining how defining the parameter or the setting of the block in the simulatable block diagram model according to the user request will alter code corresponding to the block, without generating code for the simulatable block diagram model (i.e. 0019).

Ortal does not explicitly teach generating preview of code prior to generation of code for the block diagram model based on the determining. However, Kodosky teaches such a preview was known in the pertinent art, at the time applicant's invention was made, to "allow the user to view proposed changes to a configuration diagram prior to the change being committed or applied (i.e. col. 6 lines 20-34)."

It would have been obvious for one having ordinary skill in the art to modify Ortal's disclosed system to incorporate the teachings of Kodosky. The modification would be obvious because one having ordinary skill in the art would be motivated to enable the user to preview the code representative of code for the block in the block diagram before generating the actual code.

Ortal, Kodosky further disclose the code for the simulatable block diagram model being executable to simulate the simulatable block diagram model (i.e. Ortal, 0020; Kodosky, col. 7 lines 18-35); Kodosky further discloses: one or more instructions for displaying the preview of the code on a graphical user instance (col. 6 lines 20-34).

Per claim 23: Ortal discloses one or more instructions for receiving a user request to define a parameter or a setting of a block in a simulatable block diagram model; (Col 8:0124-0125, "...a user desires to add an attribute to a class..."; Col. 2:0012)

One or more instructions for generating a preview of code representative of the code in response to the user request, the preview of the code representative of code for the block (Col 5:0080, "...displaying at least a portion of the source code that has been modified..."; 0114).

Ortal does not explicitly disclose that the model is a simulatable block diagram model. Kodosky teaches that such a use of a simulatable block diagram model was known in the pertinent art, at the time applicant's invention was made, to simulate a graphical program (i.e. col. 6 lines 20-34). It would have been obvious for one having ordinary skill in the art to modify Ortal's disclosed system to incorporate the teachings of Kodosky. The modification would be obvious because one having ordinary skill in the art would be motivated to simulate the model in Ortal to dynamically apply the model and code association.

Ortal further discloses: determining how defining the parameter or the setting of the block in the simulatable block diagram model according to the user request will alter code corresponding to the block, without generating code for the simulatable block diagram model (i.e. 0019).

Ortal does not explicitly teach generating based on the determining preview of code prior to generation of code for the block diagram model using an execution engine. However, Kodosky teaches such a preview was known in the pertinent art, at the time applicant's invention was made, to "allow the user to view proposed changes to a configuration diagram prior to the

change being committed or applied (i.e. col. 6 lines 20-34).” It would have been obvious for one having ordinary skill in the art to modify Ortal’s disclosed system to incorporate the teachings of Kodosky. The modification would be obvious because one having ordinary skill in the art would be motivated to enable the user to preview the code representative of code for the block in the block diagram before generating the actual code.

Ortal and Kodosky further disclose that the preview of code is presented in a coding format that differs from a coding format of the code for the block (i.e. Ortal, code view and active code view which is a specialization of the code view, 0019; Kodosky, a preview window for viewing various configuration diagram options,” col. 6 lines 20-34).

Kodosky further discloses: one or more instructions for displaying the preview of the code on a graphical user instance (col. 6 lines 20-34).

With respect to claim 2:

Ortal discloses receiving the parameter or the setting via the graphical user interface. (Col 8:0128, “...a user can change the name of a class...”).

With respect to claim 3:

Kodosky further discloses that the preview of the code is displayed on a graphical user interface that receives the user request (i.e. col. 31 lines 1-10).

With respect to claim 4:

Ortal discloses that preview of the code comprises a subset of code for the block. (i.e. col. 31 lines 1-10).

With respect to claim 5:

Ortal discloses that the subset of code corresponds to the parameter or the setting (i.e. col. 31 lines 1-10).

With respect to claim 7:

Ortal discloses an execution engine generating code corresponding to the block. (Col 7:0110, "...Model-code manager locates or determines relevant changes...").

With respect to claim 8:

Ortal discloses a symbolic, non-literal representation of code corresponding to the block. (Col 5:0085, "...an activity diagram...").

With respect to claim 9:

Kodosky further discloses that the generated code comprises pseudo-code (i.e. col. 6 lines 20-34).

With respect to claim 10:

Ortal discloses generating and displaying a preview of code execute in real-time after receiving the user request. (Col 4:0076, "...detect changes ...automatically update the model...", Col 5:0087, "...determine that at least a portion of the software source code has been modified...").

With respect to claim 11:

Ortal discloses the step of altering the parameter or the setting for the block after the step of displaying the generated code. (Col 8:0128, "...a user can change the name of a class in the code exit code view...").

With respect to claim 12:

Ortal discloses generating code representative of the altered parameter or the altered setting (Col 8:0128, "...a user can change the name of a class in the code exit codeview...") and displaying the code representative of the altered parameter or the altered setting on the graphical user interface. (Col 4:0076, "...detect changes ...automatically update the model...", Col 5:0087, "...determine that at least a portion of the software source code has been modified...")

With respect to claim 13:

Ortal discloses the step of altering a second parameter or a second setting in the graphical model after displaying of the preview of the code. (Col 8:0124, "...a user desires to add an attribute to a class...").



With respect to claim 14:

Ortal discloses the steps of generating code representing the altered second parameter or the altered second setting (Col 8:0124, "...a user desires to add an attribute to a class...") and displaying the code representative of the altered parameter or the altered second setting on the graphical user interface. (Col 4:0076, "...detect changes ...automatically update the model...", Col 5:0087, "...determine that at least a portion of the software source code has been modified...").

With respect to claim 16:

Ortal discloses that the user defines the parameter or the setting via a dialog box associated with the block. (Col 8:0124, "...a user desires to add an attribute to a class...").

With respect to claim 17:

Kodosky discloses that the dialog box includes a code preview field for displaying the code (i.e. col. 31 lines 1-10).

With respect to claim 18:

Kodosky discloses that generating the preview of the code and the preview of the code on a graphical user interface are executed automatically in response to the user defining the parameter or the setting (i.e. col. 31 lines 1-10).

With respect to claim 19 and 24:

Ortal discloses a computer-readable storage medium for use with an electronic device holding instructions executable by the electronic device for performing a method, (Col 8:0129, "...computer 700 used for implementing the computer processing...")comprising the steps of: Ortal further discloses: determining how defining the parameter or the setting of the block in the simulatable block diagram model according to the user request will alter code corresponding to the block, without generating code for the simulatable block diagram model (i.e. 0019).

Ortal does not explicitly disclose that the model is a simulatable block diagram model. Kodosky teaches that such a use of a simulatable block diagram model was known in the pertinent art, at the time applicant's invention was made, to simulate a graphical program (i.e. col. 6 lines 20-34). It would have been obvious for one having ordinary skill in the art to modify Ortal's disclosed system to incorporate the teachings of Kodosky. The modification would be obvious because one having ordinary skill in the art would be motivated to simulate the model in Ortal to dynamically apply the model and code association.

Ortal further discloses based on the determining, automatically updating a preview of code representative of code corresponding to the block in the simulatable block diagram model in response to the user altering the parameter or the setting; (Col 5:0080, "...displaying at least a portion of the source code that has been modified...") .

Ortal does not explicitly teach a preview of code representative of code. However, Kodosky teaches such a preview was known in the pertinent art, at the time applicant's invention was made, to "allow the user to view proposed changes to a configuration diagram prior to the change being committed or applied (i.e. col. 6 lines 20-34)." It would have been obvious for one

having ordinary skill in the art to modify Ortal's disclosed system to incorporate the teachings of Kodosky. The modification would be obvious because one having ordinary skill in the art would be motivated to enable the user to preview the code representative of code for the block in the block diagram before generating the actual code.

Ortal, Kodosky further disclose the code being executable to simulate the simulatable block diagram model (i.e.Ortal, 0020; Kodosky, col. 7 lines18-35); Kodosky further discloses: displaying the updated preview of the code on a graphical user instance (col. 6 lines 20-34).

With respect to claim 20:

Ortal discloses that the user alters the setting using the graphical user interface. (Col 8:0128, "...a user can change the name of a class...").

With respect to claim 21:

Kodosky discloses that the graphical user interface displays the updated code in real time after the step of the user altering the setting. (i.e. col. 6 lines 20-35).

With respect to claim 22:

Ortal discloses the step of the user canceling the alteration of the setting after viewing the code. (Col 8:0125, "...a user can rename a class and set the file...").

With respect to claim 25, Ortal discloses a system for generating and displaying a graphical programming application, (Col 8:0129, "...computer 700 used for implementing the

computer processing...”) comprising: user-operable input means for inputting data to the graphical programming application; (Col 8:0124-0125, "...a user desires to add an attribute to a class..."); a display device for displaying a simulatable block diagram model; (Col 6:0108, "...can display a Unified Modeling Language..."); and an electronic device including memory for storing computer program instructions and data, (Col 8:0129, "...computer 700 used for implementing the computer processing...") and a processor for executing the stored computer program instructions, (Col 8:0129, "...computer 700 used for implementing the computer processing...")the computer program instructions including instructions for providing a code to a user on the display device, (Col 7:0114, "...if a user selects an element...its implementation can be displayed in an active code view window...").

Ortal does not explicitly disclose that the model is a simulatable block diagram model. Kodosky teaches that such a use of a simulatable block diagram model was known in the pertinent art, at the time applicant's invention was made, to simulate a graphical program (i.e. col. 6 lines 20-34). It would have been obvious for one having ordinary skill in the art to modify Ortal's disclosed system to incorporate the teachings of Kodosky. The modification would be obvious because one having ordinary skill in the art would be motivated to simulate the model in Ortal to dynamically apply the model and code association.

Ortal further discloses: determining how defining the parameter or the setting of the block in the simulatable block diagram model according to the user request will alter code corresponding to the block, without generating code for the simulatable block diagram model (i.e. 0019); instructions for providing based on the determining, a code preview to a user on the

display device, after the user defines the property of the block using the user-operable input means (i.e. 0019).

Ortal does not explicitly teach a code preview displaying a preview code representative of a block in the simulatable block diagram model after the user defines a property of the block using the user-operable input means. However, Kodosky teaches such a preview was known in the pertinent art, at the time applicant's invention was made, to "allow the user to view proposed changes to a configuration diagram prior to the change being committed or applied (i.e. col. 6 lines 20-34)." It would have been obvious for one having ordinary skill in the art to modify Ortal's disclosed system to incorporate the teachings of Kodosky. The modification would be obvious because one having ordinary skill in the art would be motivated to enable the user to preview the code representative of code for the block in the block diagram before generating the actual code.

Kodosky further disclose a predictor mechanism which emulates how the code appears when the code is generated by an execution engine (Kodosky, the preview window is employed to "allow the user to view proposed changes to a configuration diagram prior to the change being committed or applied," col. 6 lines 20-34).

With respect to claim 26:

Ortal discloses that the input means comprises a graphical user interface displayed on the display device. (Col 6:0108, "...The user interface that can be used in connection...").

With respect to claim 27:

Ortal discloses that the graphical user interface includes a field for displaying the code preview. (Col 6:0108, "...an active code view is shown...to display code that can be used to display code ...").

5. Claims 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ortal. (U.S. PGPUB 2004/0034846) in view of Kodosky et al. (US Patent 7,367,028) hereafter Kodosky and further in view of Barsness et al. (U.S. Pat 7,086,046).

With respect to claim 28:

Ortal discloses a system for generating and displaying a graphical programming application, (Col 8:0129, "...computer 700 used for implementing the computer processing...")comprising: user-operable input means for inputting data to the graphical programming application; (Col 8:0124-0125, "...a user desires to add an attribute to a class...") a display device for displaying a simulatable block diagram model; (Col 6:0108, "...can display a Unified Modeling Language...", e.g. See Fig. 3 and related text) and an electronic device including memory for storing computer program instructions and data, and a processor for executing the stored computer program instructions, (Col 8:0129, "...computer 700 used for implementing the computer processing..."); receiving a first datum altering a setting of a first portion of the simulatable block diagram model (i.e. 0019; Col 8:0124-0125, "...a user desires to add an attribute to a class..."), in response to the first datum, generating a preview of code representative of code for the first portion (i.e. 0019).

Ortal does not explicitly disclose that the model is a simulatable block diagram model. Kodosky teaches that such a use of a simulatable block diagram model was known in the pertinent art, at the time applicant's invention was made, to simulate a graphical program (i.e. col. 6 lines 20-34). It would have been obvious for one having ordinary skill in the art to modify Ortal's disclosed system to incorporate the teachings of Kodosky. The modification would be obvious because one having ordinary skill in the art would be motivated to simulate the model in Ortal to dynamically apply the model and code association.

Ortal further discloses: determining how defining the parameter or the setting of the block in the simulatable block diagram model according to the user request will alter code corresponding to the block, without generating code for the simulatable block diagram model (i.e. 0019).

Ortal does not explicitly teach generating based on the determining, the preview prior to generation of code for the simulatable block diagram model. However, Kodosky teaches such a preview was known in the pertinent art, at the time applicant's invention was made, to "allow the user to view proposed changes to a configuration diagram prior to the change being committed or applied (i.e. col. 6 lines 20-34)." It would have been obvious for one having ordinary skill in the art to modify Ortal's disclosed system to incorporate the teachings of Kodosky. The modification would be obvious because one having ordinary skill in the art would be motivated to enable the user to preview the code representative of code for the block in the block diagram before generating the actual code.

Ortal further discloses receiving a second datum altering a setting of a second portion of the simulatable block diagram model (i.e.0124;0125); in response to the second datum, automatically updating a portion of the preview of the code(i.e.0076).

Ortal and Kodosky do not explicitly teach presenting the updated portion of the preview of the code in a format that differs from an un-updated portion of the preview of code. However, Barsness teaches it was known in the pertinent art, at the time applicant's invention was made, to "visually indicate a change performed to the original source code (abstract)." It would have been obvious for one having ordinary skill in the art to modify Ortal and Kodosky's disclosed system to incorporate the teachings of Barsness. The modification would be obvious because one having ordinary skill in the art would be motivated to highlight changes as taught by Barsness(Fig.5) in Ortal and Kodosky's system for easy detection of the changes.

With respect to claim 29:

Ortal discloses that the input means comprises a graphical user interface displayed on the display device. (Col 6:0108, "...The user interface that can be used in connection...").

With respect to claim 30:

Ortal discloses that the graphical user interface includes a field for displaying the updated code. (Col 6:0108, "...an active code view is shown...to display code that can be used to display code ...").



6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ortal. (U.S. PGPUB 2004/0034846) in view of Kodosky et al. (US Patent 7,367,028) hereafter Kodosky and further in view of Miller. (U.S. Pat 6,175,948).

Per claim 6:

Ortal and Kodosky do not disclose that the step of generating code comprises a predictor mechanism generating an estimation of the code. Miller discloses that the step of generating code comprises a predictor mechanism generating an estimation of the code (Col 7:10-25, "...User component selection...performance estimates as specified..." in an analogous system for the purpose of providing a method and apparatus for a waveform compiler that provides waveform application development, allows partitioning of that application functionality to a target architecture, and further provides a way of generating and optimizing code and ancillary target software for use in communication systems. (Miller: Col 2:10-16). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to include a predictor module that generates software code estimates. The modification would have been obvious because one of ordinary skill in the art would have been motivated to provide a method and apparatus for a waveform compiler that provides waveform application development, allows partitioning of that application functionality to a target architecture, and further provides a way of generating and optimizing code and ancillary target software for use in communication systems. (Miller: Col 2:10-16).

***Response to Arguments***

7. Applicant's arguments filed on 5/18/2009 have been fully considered but they are not persuasive.

Per claim 1:

The applicant states that: Ortal does not disclose determining how defining the parameter or the setting of the block in the simulatable block diagram model according to the user request will alter code corresponding to the block, without generating code for the simulatable block diagram model. The UML model of Ortal is not a simulatable block diagram model. Ortal does not disclose that the Ortal system has the ability to determine how the source code will be altered without actually generating the source code.

In response, in the instant specification and drawings, the preview generated actually contains portion(s) of code for a selected component (i.e. fig. 11C). Ortal's active code view reflecting the implementation of the currently selected model element generated without generating the entire source code and the changes made to a selected component are determined without generating the source code and then the active code view (code preview) presents the changes made to the selected component based on the determination. Ortal's model elements can be UML activity/deployment diagrams with nodes/blocks (0085) and the model code is executable (0020). Kodosky also clearly discloses the program icons contained in the configuration diagram being a simulatable block diagram (col. 7 lines 1-17; "a program icon is displayed on the configuration diagram that represents the graphical program or block diagram," col. 60 lines 27-47; Fig. 24A showing Tank simulation).

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to INSUN KANG whose telephone number is (571)272-3724. The examiner can normally be reached on M-R 7:30-6 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lewis A. Bullock, Jr. can be reached on 571-272-3759. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Insun Kang/  
Primary Examiner, Art Unit 2193